**Product Datasheet**

# 24-port Full Gigabit Managed Industrial PoE Switch

## (GWS-IPS33024PM)



## OVERVIEW

The GWS-IPS33024PM is a gigabit L2+ managed industrial PoE switch. It has 24*10/100/1000Base-T adaptive RJ45 ports. Port 1-16 can support IEEE 802.3 af/at PoE standard, and the single-port PoE power up to 30W. As a PoE power supply device, it can automatically detect and identify powered devices that meet standards and power them through network cables. Use network cables to power wireless APs, network cameras, network phones, industrial sensors, and other POE terminal equipment to meet network environments that require a high-density PoE power supply. It is suitable for establishing economical, efficient, stable, and reliable communication networks in industrial scenarios such as intelligent transportation, rail transportation, power industry, mining, petroleum, shipping, metallurgy, and green energy construction.

The GWS-IPS33024PM has L2+ network management functions, supports IPV4/IPV6 management, static route forwarding, complete security protection mechanisms, complete ACL/QoS policies, and rich VLAN functions for easy management and maintenance. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication for important

applications. According to application needs, PoE management, port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other business configurations are performed through network management methods such as Web, CLI, SNMP, and Telnet.

## FEATURE

### ■ Full Gigabit access, wire-speed transmission

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

◇ Support line-speed full Gigabit Ethernet port, which facilitates flexible networking of users and meets networking requirements in various scenarios.

### ■ Intelligent PoE power supply

◇ IEEE802.3af/at PoE standard, without damaging non-PoE devices.

◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

◇ Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.

◇ 16*10/100/1000Base-T RJ45 ports can support POE power supply to meet the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

### ■ Security

◇ Support port isolation.

◇ Support port broadcast storm suppression.

◇ Support IP+MAC+port+VLAN quadruple flexible combination binding function.

◇ Support 802.1X authentication to provide authentication functions for LAN computers, and control the authorization status of controlled ports according to the authentication results.

### ■ Strong business processing capability

◇ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN, and QinQ configuration.

◇ ERPS Ring network STP/RSTP/MSTP spanning tree protocol eliminates layer 2 loops and

realizes link backup.

◇ QoS, port-based, 802.1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.

◇ ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.

◇ Static aggregation and dynamic aggregation effectively increase link bandwidth, achieve load balancing, and link backup, and improve link reliability.

◇ Support IGMP V1/V2 multicast protocol and IGMP Snooping to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.

### ■ Stable and reliable

◇ CCC, CE, FCC, RoHS.

◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A, and PoE.

◇ Low power consumption, fanless, aluminum alloy shell, excellent heat dissipation to ensure stable operation of the product.

### ■ Easy O&M management

◇ CPU monitoring, memory monitoring, Ping detection, cable detection.

◇ HTTPS, SSLV3, SSH V1/V2, and other encryption methods make management more secure.

◇ RMON, system logs, and port traffic statistics facilitate network optimization and transformation.

◇ LLDP facilitates the network management system to query and determine the communication status of the link.

◇ Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet and other diversified management and maintenance methods.

## TECHNICAL SPECIFICATION

| Model | GWS-IPS33024PM |
|---|---|
| Interface Characteristics | |

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|---|---|
| Fixed Port | Power-off alarm switch (FAULT) |
| | 1*RS232 Console port (115200,N,8,1) |
| | 8*10/100/1000Base-T RJ45 ports(Data) |
| | 16*10/100/1000Base-T PoE ports (Data /Power) |
| | 2 set of V+, V- redundant DC power interface (6 Pin Phoenix terminal) |
| Ethernet Port | Port 1-24 support 10/100/1000Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption |
| Twisted Pair Transmission | 10BASE-T: Cat3,4,5 UTP(≤100 meters) |
| | 100BASE-TX: Cat5 or later UTP(≤100 meters) |
| | 1000BASE-T: Cat5e or later UTP(≤100 meters) |
| **Chip Parameter** | |
| Network Management Type | L2+ |
| Network Protocol | IEEE802.3 10BASE-T, IEEE802.3i 10Base-T |
| | IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, IEEE802.3x |
| Forwarding Mode | Store and Forward(Full Wire Speed) |
| Switching Capacity | 52Gbps (Non-blocking) |
| Forwarding Rate@64byte | 35.71Mpps |
| CPU | 416MHz |
| DRAM | 1G |
| FLASH | 128M |
| MAC | 8K |
| Buffer Memory | 8M |
| Jumbo Frame | 9.6K |
| LED Indicator | Power: PWR(Green), POE: PoE (Green) |
| | System: SYS(Green), Network: Link (Yellow) |
| Reset Switch | Yes, support one key to restore factory settings |

| PoE & Power Supply | |
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| PoE Port | Port 1 to 16, IEEE 802.3 af/at |
| PoE Management | Port PoE working status display<br><br>Port PoE output priority configuration<br><br>PoE power supply total power limit configuration<br><br>Power delay start, PoE work and time scheduling<br><br>Port PoE output power distribution, PoE on/off, af/at power distribution |
| Power Supply Pin | 1/2 (+) 3/6 (-) |
| Max Power Per Port | 30W, IEEE 802.3 af/at |
| Power Consumption | Standby<10W, Full Load af<240W, at<480W |
| Power Input Interface | DC48-57V, 6 Pin industrial Phoenix terminal, support anti-reverse protection. |
| Power Supply | No, optional 48V/240W or 48V/480W industrial power supply |
| **Physical Parameter** | |
| Operation TEMP / Humidity | -40~+80°C, 5%~90% RH Non condensing |
| Storage TEMP / Humidity | -40~+85°C, 5%~95% RH Non condensing |
| Dimension (L*W*H) | 166*150*90mm |
| Net /Gross Weight | <2.2kg /<2.8kg |
| Installation | Desktop, DIN rail |
| **Certification & Warranty** | |
| Lightning Protection | Protection level: IP40<br><br>Lightning protection: 6KV 8/20us<br><br>IEC61000-4-3 (RS):10V/m (80~1000MHz)<br><br>FCC Part 15/CISPR22 (EN55022): Class B<br><br>IEC61000-6-2 (Common Industrial Standard)<br><br>IEC61000-4-9 (Pulsed magnet field): 1000A/m<br><br>IEC61000-4-10 (Damped oscillation): 30A/m 1MHz |

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| | IEC61000-4-12/18 (Shockwave): CM 2.5kV, DM 1kV |
| | IEC61000-4-4(EFT): Power cable: ±4kV; data cable: ±2kV |
| | IEC61000-4-16 (Common-mode transmission): 30V, 300V, 1s |
| | IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge |
| | IEC61000-4-6 (Radio frequency transmission): 10V(150kHz~80MHz) |
| | IEC61000-4-8 (Power frequency magnetic field): 100A/m, 1000A/m,1s to 3s |
| | IEC61000-4-5 (Surge): Power cable: CM±4kV/ DM±2kV, data cable: ±4kV |
| Mechanical Properties | IEC60068-2-6 (anti vibration), IEC60068-2-27 (anti shock)<br>IEC60068-2-32 (free fall) |
| Certification | CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS |
| Warranty | 5 years, lifelong maintenance. |
| **Network Management Features** | |
| Interface | IEEE802.3X (Full-duplex)<br>Port temperature protection setting<br>Port green Ethernet Energy-saving setting<br>Broadcast storm control based on port speed<br>The speed limit of the message flow in the access port, mini particle size is 64Kbps. |
| Layer 3 Features | ARP protocol max 1024 entries<br>Static routing/ default routing max 128 entries<br>L2+ network management, IPV4/IPV6 dual stack management<br>L3 routing and forwarding, and communication between different network segments and different VLAN |
| VLAN | Access, Trunk, and Hybrid port configurations<br>Port-based VLAN (4K), IEEE802.1q, QinQ configuration<br>Voice VLAN, Protocol-based VLAN, MAC address-based VLAN |
| Port Aggregation | LACP dynamic aggregation, Static aggregation |

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| | Max 12 aggregation groups and 8 ports per group. |
| Spanning Tree | STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s) |
| Industrial Ring Network Protocol | Recovery time less than 20ms<br><br>G.8032 (ERPS), 250 Ring at most, Max 250 devices per ring. |
| Multicast | MLD Snooping v1/v2, Multicast VLAN<br><br>IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out |
| Port Mirroring | Bidirectional data mirroring based on port |
| QoS | Flow-based redirection, Flow-based rate limiting<br><br>Flow-based packet filtering, Priority Mark/Remark<br><br>8*Output queues of each port, 802.1p/ DSCP priority mapping<br><br>Queue Scheduling Algorithm (SP, WRR, SP+WRR), Diff-Serv QoS |
| ACL | Port-based Issuing ACL, ACL based on port and VLAN<br><br>L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc. |
| Security | SSH 2.0, SSL, Port isolation, ARP message speed limit<br><br>User hierarchical management and password protection<br><br>AAA & RADIUS & TACACS+ certification, MAC learning limit<br><br>IEEE802.1X & MAC address authentication, ARP inspection<br><br>IP-MAC-VLAN-Port binding, Anti-DoS attack, IP source protection<br><br>Broadcast storm control, Backup for host datum, Mac black holes |
| DHCP | DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay |
| Management | Web network management (https)<br><br>View CPU real-time utilization status<br><br>Link Layer Discovery Protocol (LLDP)<br><br>NTP clock, SNMP V1/V2/V3, System work log<br><br>One click recovery, Ping detection, Cable status check<br><br>NMS platform cluster management (LLDP+SNMP)<br><br>Console/ AUX Modem/ Telnet/ SSH2.0 and CLI configuration |

| | FTP, TFTP, Xmodem, SFTP file upload and download management |
|---|---|
| System | Category 5 and above Ethernet cables |
| | Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Microsoft Internet Explorer 10 or higher |
| | TCP/IP, network adapters, and network operating systems (such as Microsoft Windows, Linux, or Mac OS X) are installed on each computer in the network over Category 5 and above Ethernet cables. |

## DIMENSION
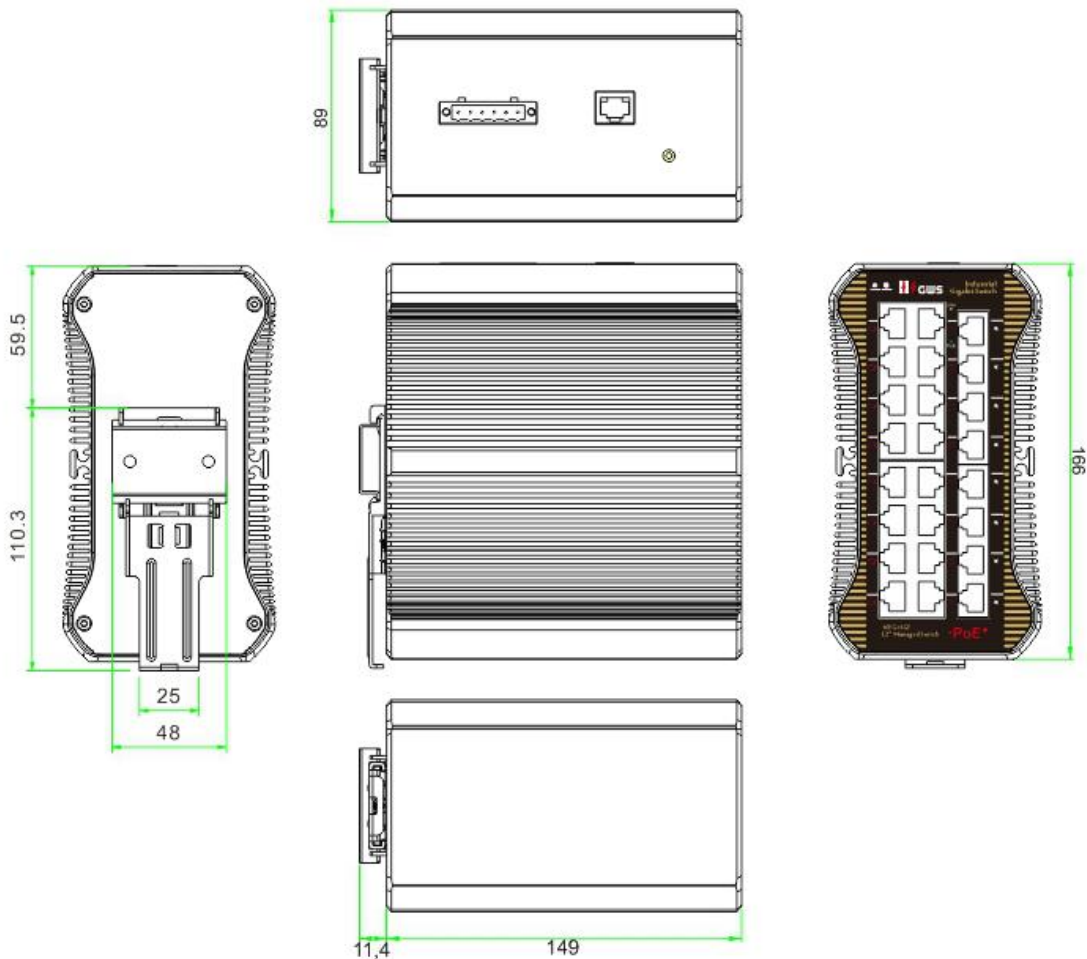
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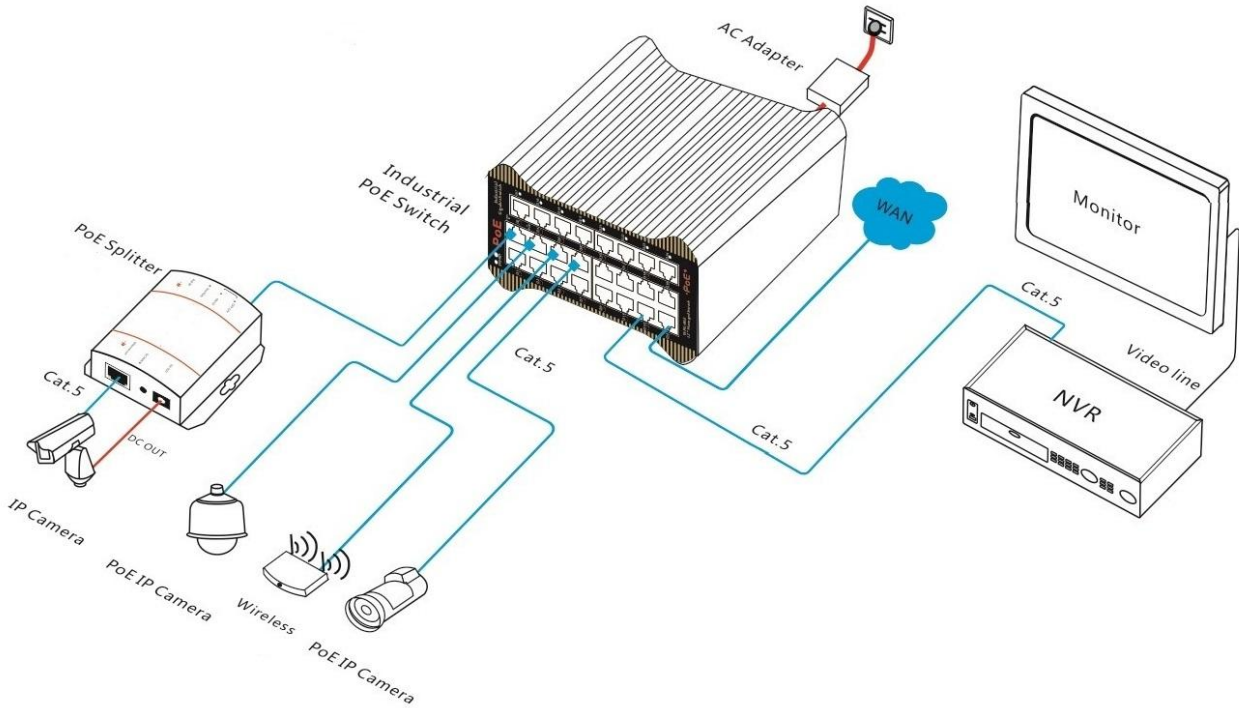


# ORDERING INFORMATION

| Model | Description | Recommended Power Supply |
|-------|-------------|--------------------------|
| GWS-IPS33024 PM | L2+ managed industrial PoE switch with 24*10/100/1000M RJ45 ports. Port 1-16 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. | 240W/480W |
| **Note:** The power supply is not included and needs to be purchased. | | |

# PACKING LIST

| | Content | Qty | Unit |
|---|---|---|---|
| **Packing List** | 24-port full gigabit managed industrial PoE switch | 1 | SET |
| | RJ45-DB9 Line | 1 | PC |
| | User Guide | 1 | PC |
| | Warranty Card | 1 | PC |

# POWER SUPPLY

| Product | Model | Description | Unit |
|---|---|---|---|
| 250W Desktop Power Adapter | AP250-52 | Desktop 250W single set of output power adapter<br>Input Voltage: AC100V~240V 50-60Hz, 4.1A<br>Output Voltage: DC52V, 4.8A<br>Operation Temperature: -20℃ to +65℃ | PC |
| 240W DIN Rail Industrial Power Supply | DP240-48 | DIN Rail 240W single set of output power supply<br>Input Voltage: AC100V~240V 50-60Hz, 3.0A<br>Output Voltage: DC48V, 5.0A<br>Operation Temperature: -40℃ to +70℃ | PC |
| 480W DIN Rail Industrial Power Supply | DP480-48 | DIN Rail 480W single set of output power supply<br>Input Voltage: AC100V~240V 50-60Hz, 5.0A<br>Output Voltage: DC48V, 10A<br>Operation Temperature: -40℃ to +70℃ | PC |

# RELATED PRODUCT

| Model | Description |
|---|---|
| IPS33064PFM | L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports |

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| | and 2*100/1000M SFP slot ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. |
| IPS33108PFM | L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. |
| IPS33148PFM | L2+ managed industrial PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP slot ports, Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. |
| IPS33168PFM | L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. |
| IPS33168PFM-4GF | L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. |
| IPS33016PM | L2+ managed industrial PoE switch with 16*10/100/1000M RJ45 ports. Port 1-16 can support IEEE 802.3 af/at PoE standard. It can support dual DC power supply input and DIN rail mounting. |

## Contact Us

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